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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/833,667	04/13/2001	Manjari Kuntimaddi	174-885	1721

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EXAMINER	
HUNTER, ALVIN A	

ART UNIT	PAPER NUMBER
3711	

DATE MAILED: 09/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/833,667	KUNTIMADDI ET AL.	
	Examiner	Art Unit	
	Alvin A. Hunter	3711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133) Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 June 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,9-33 and 39-42* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,9-33 and 39-42* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

The indicated allowability of the previous claims are withdrawn in view of the newly discovered reference(s) to Tomko et al. (USPN 6022925), Lee et al. (USPN 4569964), Renard et al. (USPN 5989136), Sullivan (USPN 6827657), and Sullivan et al. (USPN 6743847). Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 4, 24, 26, and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Sullivan et al. (USPN 6100336).

Regarding claim 4, Sullivan et al. discloses a golf ball having a core and cover wherein Sullivan et al. notes that the cover may an interpenetrating polymer network (See Claim 1 and Column 27, lines 10 through 21). Sullivan et al. also notes the polymer comprises an acrylate copolymer. It should be noted that the claim language does not exclude the IPN from being ionomeric.

Regarding claims 24 and 26, Sullivan et al. discloses providing a golf ball center and provides a cover layer covering the center wherein the cover layer may be an interpenetrating polymer network.

Regarding claim 28, Sullivan et al. disclose the interpenetrating polymer network comprising an acrylate copolymer.

Claims 1, 3, 4, 22-24, 26-28 are rejected under 35 U.S.C. 102(e) as being anticipated by Sullivan et al. (USPN 6743847).

Regarding claim 1, Sullivan et al. discloses a golf ball having a core and cover wherein Sullivan et al. notes that the cover may an interpenetrating polymer network (See Summary of the Invention and Column 43). Sullivan et al. also notes the polymer comprises an ethylene methyl acrylate (EMA) copolymer having a polyethylene backbone (See Paragraph bridging columns 20 and 21). It should be noted that the claim language does not exclude the IPN from being ionomeric.

Regarding claim 3, Sullivan et al. discloses the cover material having a hardness greater than 15 Shore A (See the Examples) and the golf ball has a coefficient of restitution of greater than 0.7 (See the Examples).

Regarding claim 4, Sullivan et al. discloses a golf ball having a core and cover wherein Sullivan et al. notes that the cover may an interpenetrating polymer network (See Summary of the Invention and Column 43). Sullivan et al. also notes the polymer comprises an acrylate copolymer. It should be noted that the claim language does not exclude the IPN from being ionomeric.

Regarding claims 22 and 23, Sullivan et al. discloses a cover made of an IPN. Sullivan et al. would inherently have a shear rating of at least 1 and at most 2 category lower than the material free of an IPN being that both the properties of the combined materials are present and no reaction has occurred to make the combination of materials harder.

Regarding claims 24 and 26, Sullivan et al. discloses providing a golf ball center and provides a cover layer covering the center wherein the cover layer may be an interpenetrating polymer network.

Regarding claim 27, Sullivan et al. also notes the polymer comprises an ethylene methyl acrylate (EMA) copolymer having a polyethylene backbone (See Paragraph bridging columns 20 and 21).

Regarding claim 28, Sullivan et al. also notes the polymer comprises an acrylate copolymer.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2 and 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sullivan et al. (USPN 6743847).

Regarding claim 2, Sullivan et al. discloses that the golf ball has a solid core, wherein solid core includes golf ball having separate layers between the cover and

above the core (See Column 28, lines 36 through 41). One having ordinary skill in the art would have found it obvious to incorporate and number of layers between the core and cover so long as the golf ball's playability and durability is not deteriorated.

Regarding claims 18-21, Sullivan et al. disclose the core being made of any standard golf ball core (i.e. solid, liquid, wound) (See Column 28, lines 36 through 52). Furthermore, it should be noted that applicant does not set forth the critically of the number of layers of the golf ball and the type of material used within those layers. One having ordinary skill in the art would have concluded that the any type of material and number of layers may be used within the golf ball so long as one of the layer comprise an IPN and the desired properties for the golf ball are attained. Also see the above regarding claim 2.

Claims 4, 10-17, 24, 25, 28-30, 32, 33, 39, 41, and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Renard et al. (USPN 5989136) in view of Lee et al. (USPN 4569964).

Regarding claim 4, Renard et al. discloses a golf ball having a core, intermediate layer, and cover wherein the intermediate layer is made of a latex. Renard et al. also contemplates that other latexes may be used also. Lee et al. discloses a latex material having an interpenetrating polymer network. One having ordinary skill in the art would have found it obvious to incorporate an IPN into the intermediate layer in order to improve the mechanical properties of the layer such as tensile strength, elongation, etc. Lee et al. discloses the non-ionomeric IPN comprising a styrenic moiety or conjugated diene (See Abstract and Column 4).

Regarding claims 10-13, the combination of Renard et al. and Lee et al. discloses a golf ball having an IPN as set forth above regarding claims 4. Lee et al. also discloses the IPN having at least two polymeric components. It is also submitted that the IPN exhibits a ΔT_g between any two of the polymeric components at least 50% less than the ΔT_g between a polymer blend comprising the same two polymeric components being that material substantially similar to that of the applicant is disclosed by Lee et al. It is also submitted that only one of the ΔT_g are observable for the reasons set forth above.

Regarding claims 14 and 15, the combination of Renard et al. and Lee et al. discloses a golf ball having an IPN as set forth above regarding claims 4. Lee et al. also discloses the IPN having at least two polymeric components. It is also submitted that Lee et al. has at least one component which is crystallizable polymeric component that exhibits an area under a melting endotherm of at least about 2% less than the area under the melting endotherm of a homopolymer of the same crystallizable polymeric component being that material substantially similar to that of the applicant is disclosed by Lee et al.

Regarding claims 16 and 17, the combination of Renard et al. and Lee et al. discloses a golf ball having an IPN as set forth above regarding claims 4. Lee et al. also discloses the IPN having at least two polymeric components. It is also submitted that Lee et al. has an average phase size of at least 10% less than the average phase size of that phase separated component in a blend or mixture of the at least two components being that material substantially similar to that of the applicant is disclosed by Lee et a.

Regarding claim 24, Renard et al. discloses providing a golf ball center and disposing a latex about the golf ball center. Renard et al. does not disclose the latex being an IPN. Lee et al. discloses a latex material having an interpenetrating polymer network. One having ordinary skill in the art would have found it obvious to incorporate an IPN into the intermediate layer in order to improve the mechanical properties of the layer such as tensile strength, elongation, etc.

Regarding claim 25, the combination of Renard et al. and Lee et al. discloses the IPN being in an intermediate layer disposed about the center.

Regarding claims 28, Lee et al. discloses the IPN comprising a copolymer having a vinyl acetate group (See Column 3, lines 50 through 54).

Regarding claims 29, Lee et al. discloses the non-ionomeric IPN comprising a styrenic moiety or conjugated diene (See Abstract and Column 4).

Regarding claims 30, Renard et al. discloses providing a golf ball center and disposing a latex about the golf ball center. Renard et al. does not disclose the latex being an IPN. Lee et al. discloses a latex material having anon-ionomeric interpenetrating polymer network. One having ordinary skill in the art would have found it obvious to incorporate an IPN into the intermediate layer in order to improve the mechanical properties of the layer such as tensile strength, elongation, etc.

Regarding claim 32, Lee et al. discloses the IPN comprising a copolymer having a vinyl acetate group (See Column 3, lines 50 through 54).

Regarding claim 33, Lee et al. discloses the non-ionomeric IPN comprising a styrenic moiety or conjugated diene (See Abstract and Column 4).

Regarding claims 39, Renard et al. discloses a golf ball having a core, intermediate layer, and cover wherein the intermediate layer is made of a latex. Renard et al. also contemplates that other latexes may be used also. Lee et al. discloses a latex material having an interpenetrating polymer network. One having ordinary skill in the art would have found it obvious to incorporate an IPN into the intermediate layer in order to improve the mechanical properties of the layer such as tensile strength, elongation, etc.

Regarding claim 41, Lee et al. discloses the IPN comprising a copolymer having a vinyl acetate group (See Column 3, lines 50 through 54).

Regarding claim 42, Lee et al. discloses the non-ionomeric IPN comprising a styrenic moiety or conjugated diene (See Abstract and Column 4).

Claims 1, 2, 3, 8, and 9-28, 30-32, and 39-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Renard et al. (USPN 5989136) in view of Tomko et al. (USPN 6022925).

Regarding claims 1, 2, and 4, Renard et al. discloses a golf ball having a core, intermediate layer, and cover wherein the intermediate layer is made of a latex. Renard et al. also contemplates that other latexes may be used also. Tomko et al. discloses a latex being a semi-IPN an being non-ionomeric (See Summary of the Invention). The semi-IPN comprises a urethane (See Abstract). One having ordinary skill in the art would have found it obvious to incorporate a semi-IPN into Renard et al. in order to increase the adhesion and durability of the golf ball.

Regarding claims 8 and 9, Renard et al. discloses a golf ball having a core, intermediate layer, and cover wherein the intermediate layer is made of a latex. Renard et al. also contemplates that other latexes may be used also. Tomko et al. discloses a latex being a semi-IPN an being non-ionomeric (See Summary of the Invention). One having ordinary skill in the art would have found it obvious to incorporate a semi-IPN into Renard et al. in order to increase the adhesion and durability of the golf ball.

Regarding claims 10-13, the combination of Renard et al. and Tomko et al. discloses a golf ball having an IPN as set forth above regarding claims 4. Tomko et al. also discloses the IPN having at least two polymeric components. It is also submitted that the IPN exhibits a ΔT_g between any two of the polymeric components at least 50% less than the ΔT_g between a polymer blend comprising the same two polymeric components being that material substantially similar to that of the applicant is disclosed by Tomko et al. It is also submitted that only one of the ΔT_g are observable for the reasons set forth above.

Regarding claim 14 and 15, the combination of Renard et al. and Tomko et al. discloses a golf ball having an IPN as set forth above regarding claims 4. Tomko et al. also discloses the IPN having at least two polymeric components. It is also submitted that Tomko et al. has at least one component which is crystallizable polymeric component that exhibits an area under a melting endotherm of at least about 2% less than the area under the melting endotherm of a homopolymer of the same crystallizable polymeric component being that material substantially similar to that of the applicant is disclosed by Tomko et al.

Regarding claims 16 and 17, the combination of Renard et al. and Tomko et al. discloses a golf ball having an IPN as set forth above regarding claims 4. Tomko et al. also discloses the IPN having at least two polymeric components. It is also submitted that Tomko et al. has an average phase size of at least 10% less than the average phase size of that phase separated component in a blend or mixture of the at least two components being that material substantially similar to that of the applicant is disclosed by Tomko et al.

Regarding claims 18-21, Renard et al. discloses the core being solid sphere and that the cover may comprise one or more layers (See Columns 3 and 4). Furthermore, it should be noted that applicant does not set forth the critically of the number of layers of the golf ball and the type of material used within those layers. One having ordinary skill in the art would have concluded that the any type of material and number of layers may be used within the golf ball so long as one of the layer comprise an IPN and the desired properties for the golf ball are attained.

Regarding claims 22 and 23, The combination of Renard et al. and Tomko et al.. discloses a cover made of an IPN. Sullivan et al. would inherently have a shear rating of at least 1 and at most 2 category lower than the material free of an IPN being that both the properties of the combined materials are present and no reaction has occurred to make the combination of materials harder. Furthermore, Tomko et al. discloses the material set forth by the applicant.

Regarding claim 24, Renard et al. discloses providing a golf ball center and disposing a latex about the golf ball center. Tomko et al. does not disclose the latex

being an IPN. Tomko et al. discloses a latex material having an interpenetrating polymer network. One having ordinary skill in the art would have found it obvious to incorporate an IPN into the intermediate layer in order to improve adhesion and durability.

Regarding claim 25, the combination of Renard et al. and Tomko et al. discloses the IPN being in an intermediate layer disposed about the center.

Regarding claims 28, Tomko et al. discloses the IPN comprising a copolymer having urethane (See Abstract).

Regarding claims 30, Renard et al. discloses providing a golf ball center and disposing a latex about the golf ball center. Renard et al. does not disclose the latex being an IPN. Tomko et al. discloses a latex material having an interpenetrating polymer network. Tomko et al. also notes that the urethane component may be prepared non-aromatic (See Columns 2 and 3). One having ordinary skill in the art would have found it obvious to incorporate an IPN into the intermediate layer in order to improve the mechanical properties of the layer such as tensile strength, elongation, etc.

Regarding claim 31, Tomko et al. discloses the IPN comprising a copolymer having a urethane (See Abstract).

Regarding claim 32, Tomko et al. discloses the IPN having a alkyl-acrylate (See Column 6, lines 30 through 64).

Regarding claims 39, Renard et al. discloses a golf ball having a core, intermediate layer, and cover wherein the intermediate layer is made of a latex. Renard et al. also contemplates that other latexes may be used also. Tomko et al. discloses a latex material having an interpenetrating polymer network. One having ordinary skill in

the art would have found it obvious to incorporate an IPN into the intermediate layer in order to improve the adhesion and durability of the golf ball.

Regarding claim 40, Lee et al. discloses the IPN comprising a copolymer having a urethane (See Abstract).

Regarding claim 41, Tomko et al. discloses the IPN having a alkyl-acrylate (See Column 6, lines 30 through 64).

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 24, 25, and 39 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 15 of U.S. Patent No. 6827657. Although the conflicting claims are not identical, they are not patentably distinct from each other because U.S. Patent 6827657 claims the same general subject matter as that of the applicant except that the intermediate layer may contain other materials. Though the language is not identical, U.S. Patent 6827657 anticipates the instant claimed invention.

Response to Arguments

Applicant's arguments with respect to claims 1-42 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alvin A. Hunter whose telephone number is (571) 272-4411. The examiner can normally be reached on Monday through Friday from 7:30AM to 4:00PM Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Greg Vidovich, can be reached on 571-272-4415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AAH

Alvin A. Hunter, Jr.

STEPHEN BLAU
PRIMARY EXAMINER